least a portion of the user's lumbo-pelvic region, hips and at least a portion of the legs or lower extremities.

[0010] The garment may be fabricated of a stretchable, yet taut material in order to provide the desirable form-fitting feature such that specific pressure may be readily applied to the surface of the skin over specific anatomical landmarks for neuromuscular stimulation. In this regard, the garment is preferably fabricated of elastomeric material that is also preferably breathable and/or which has moisture wicking capabilities such as may be provided by a material comprised of a combination of lycra and spandex, Fabrifoam, nylon or the like.

[0011] The shorts/pants create a sensation/cue on the skin through the design that specifically bends, compresses and directs the nerve receptors in the skin (peripheral nervous system **20-80** nerve endings/square inch on skin, in muscles, tendons, joint lining, etc.) to be pulled in such a way and in such a specific direction that tells the brain to instantly relax and lengthen specific, over used, under stretched muscles while the brain simultaneously commands the opposite (front to back and/or side to side), weak, under toned, under supportive muscles to contract, tone and support the wearer's core and lower extremities. This natural reflexive response is known as reciprocal inhibition and this naturally balancing muscle stimulation system retrains the wearer's muscles every time the garment is put on to create a wearable, therapeutic short/pant that decreases muscle and joint pain, improves recovery from training, travel and injury and improves aberrant biomechanics that create muscle imbalances. In a preferred embodiment, the desired cues and responses are provided by a strap system that twists each leg in a spiral manner to rotate the leg toward where the muscles are underused and weak. Spirals and spiral physiology are naturally occurring within the human body and nature as a whole and can all be related through the Fibonacci numbers or Fibonacci structure. The Fibonacci numbers are nature's numbering system. They appear everywhere in nature, from the leaf arrangement in plants, to the pattern of the florets of a flower, the bracts of a pinecone, or the scales of a pineapple. The Fibonacci numbers are therefore applicable to the growth of every living thing, including a single cell, a grain of wheat, a hive of bees, and even humans.

[0012] The Fibonacci sequence is 1, 1, 2, 3, 5, 8, 13, 21, 34, 55, and so on. It begins with the number 1, and each new term from there is the sum of the previous two. The limit ratio between the terms is 0.618034 . . . , an irrational number variously called the "golden ratio" and/or the "divine proportion," but in this century more succinctly "PHI" (f) after the architect Phidias, who designed the Parthenon. In other words, any two adjoining numbers equal the next higher number. For example, 5+8=13. Any number divided by the next higher number gives a ratio of 0.618. For example, 8/13=0.618. Any number divided by the next lower number gives a reciprocal of 1.618.

[0013] In the lower numbers the ratios are not exact, but close enough for practical purposes. Both the Fibonacci Sequence and the Golden Ratio appear in natural forms ranging from the geometry of the DNA molecule (and the human body) to the physiology of plants and animals. In recent years, science has taken a quantum leap in knowledge concerning the universal appearance and fundamental importance of Fibonacci mathematics. Some of history's greatest minds, from Pythagoras to Isaac Newton, have held phi (f) and the Fibonacci sequence in the highest esteem and reverence.

[0014] All human senses, including hearing, touch, taste, vision and pain receptors, have not only spiral physiology, but also response curves that are logarithmic (having a fibonacci structure). Cellular action membrane potentials, which are important for muscles and the nervous system, have a voltage equal to the log of the ratio of the ion concentration outside the cell to that of inside the cell. The brain and nervous systems are made from the same type of cellular building units and look similar microscopically, so the response curve of the central nervous system is probably also logarithmic. This spiral/helical physiology is utilized by the design of the garment of the present invention. The straps extend about the axis of the legs or feet.

[0015] The design stimulates the sensorimotor system (sensori includes the nervous system combined with the (motor) musculoskeletal system), instantly cueing a wearer's lower body into muscular balance and ideal anatomical alignment. This stimulates the user's anatomy on both a conscious and subconscious level. This instantly allows the wearer to move with more biomechanical efficiency which means using less energy while enhancing and optimizing body mechanics and gait. This has an effect that decreases normal wear and tear on joints and enhances healthy circulation and recovery from training, travel, and injury.

[0016] It will be appreciated that virtually every time a user puts the garment on, he/she is training. The garment makes weak muscles work. When a weak muscle works it helps to balance the muscles so the body is using all sides to work with rhythm and synchrony making the body move with more efficiency, greater fluidity and less effort.

[0017] In accordance with one preferred embodiment of the present invention, there is provided a garment adapted to be worn by a wearer. The garment includes a main body portion that is configured to be worn over at least a portion of the wearer's lumbo-pelvic region, hips and at least a portion of the legs. The main body portion includes first and second leg portions that each define an axis. The garment also includes at least a first strap associated with the main body portion that is releasably affixed to the first leg portion, and at least a first grip layer associated with the main body portion. The first strap overlies the first grip layer. The first grip layer is configured to come into contact with a wearer's skin when the garment is worn. In a preferred embodiment, the first strap is positioned such that it extends in a spiral about the axis of the first leg portion. In a preferred embodiment, the first and second leg portions include a stirrup extending from the bottom thereof and an adjustable arch strap attached at an upper end to the leg portion and at a lower end to the stirrup. Preferably, the stirrups each include a longitudinal arch support, a transverse arch support and a heel support.

[0018] In accordance with another preferred embodiment of the present invention, there is provided a garment adapted to be worn by a wearer. The garment includes a main body portion that is configured to be worn over at least a portion of the wearer's lumbo-pelvic region, hips and at least a portion of the legs, wherein the main body portion includes first and second leg portions that each define an axis. The garment also includes a strap system that includes a plurality of leg straps releasably affixed to the main body portion.